

Remarks

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 1-7 are currently pending in the application; Claims 1 and 3-7 having been amended by way of the present response.

In the outstanding Office Action, Claims 1, 2 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,404,828 to Blachford.

Claims 1-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Publication No. 03177498 or Japanese Publication No. 02097596.

Applicants respectfully assert that the rejections of the claims have been overcome for the following reasons.

As stated above, Claims 1, 2, and 7 have been amended to recite differing features. Claims 1-7 have also been amended so as to correct informalities and/or to be in conformance with standard U.S. practice. Applicants respectfully assert that support for the changes to the claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.

The present invention is directed to working fluids, working processes, and methods of production of working fluids. Independent Claim 1 recites a working fluid having a solvent and microcapsules including an etchant, the microcapsules being dispersed in the solvent. Independent Claim 3 recites a working process including supplying a working fluid to a working point of a workpiece, and performing a cutting process of the workpiece at the working point while supplying the working fluid to the working point. Independent Claim 4 recites a working

process including supplying a working fluid to a working point of a workpiece, and performing a grinding process of the workpiece at the working point while supplying the working fluid to the working point. Independent Claim 5 recites a working process including forming a mixture of a working fluid and abrasive particle, supplying the mixture of the working fluid and the abrasive particles to a working point of a workpiece, and performing a polishing process of the workpiece at the working point while supplying the mixture to the working point. Independent Claim 6 recites a working process including supplying a working fluid to a working point of a workpiece, and performing a plastic deformation process of the workpiece at the working point while supplying the working fluid to the working point. Independent Claim 7 recites a method of production of a working fluid including producing microcapsules having an etchant, and mixing the microcapsules and a solvent so that the microcapsules are dispersed in the solvent to form the working fluid.

Regarding the rejection in view of Blachford, Blachford is directed to a method of drawing a metal wire and a lubricant composition therefore. Specifically, Blachford states a microencapsulated liquid additive is mixed with a liquid wire drawing lubricant.¹ Liquid lubricants, for example, may be encapsulated.²

However, because the microencapsulated liquid additive does not include an etchant, for example, in Blachford, Applicants respectfully assert that Blachford does not teach the claimed features of microcapsules including an etchant, as recited in independent Claims 1 and 7.

Specifically, independent Claim 1 recites “microcapsules comprising an etchant.” Similarly, independent Claim 7 recites “producing microcapsules comprising an etchant.” Thus, for at least these reasons, Applicants respectfully

¹ Column 5, lines 16-25.

² Column 6, lines 59-60.

request that the rejection of independent Claims 1 and 7, as well as dependent Claim 2 that depends from independent Claim 1, under 35 U.S.C. § 102(b) be withdrawn.

Regarding the rejection of Claims 1, 2 and 7 in view of Japanese Publication No. 03177498, the Japanese publication states a lubricant comprises a microcapsule containing antibacterial agent, mineral oil, and lubricant.

However, because the microcapsule does not contain an etchant, for example, in Japanese Publication No. 03177498, Applicants respectfully assert that the Japanese publication does not teach or suggest the claimed features of microcapsules including an etchant, as recited in Claims 1, 2, and 7.

Regarding the rejection of Claims 1, 2 and 7 in view of Japanese Publication No. 02097596, the Japanese publication states a new working oil agent consists of microcapsules including lubricant blended in water.

However, because the microcapsules do not include an etchant, for example, in Japanese Publication No. 02097596, Applicants respectfully assert that the Japanese publication does not teach or suggest the claimed features of microcapsules including an etchant, as recited in Claims 1, 2, and 7.

Thus, for the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) of Claims 1, 2, and 7 be withdrawn.

Further, Applicants respectfully assert that the rejection of Claims 1, 2 and 7 have been overcome for the above reasons, and therefore respectfully request that Claims 1, 2 and 7 be allowed.

Regarding the rejection of independent Claims 3-6 in view of Japanese Publication No. 03177498 or Japanese Publication No. 02097596, Applicants respectfully concur with the Office Action's concession that "the references do not

recite specific metal working operations, i.e., cutting, polishing, grinding, or plastic deformation.”³

The Office Action asserts, however, that “[i]t would be obvious to encapsulate a liquid, to form microcapsules, admix them with a second liquid and use them in metal working operations.”⁴ Applicants respectfully assert that even if Applicants agreed with these assertions, which Applicants do not, the Japanese publications still do not teach or suggest the claimed features recited in independent Claims 3-6.

Rather, Applicants respectfully assert that each of independent Claims 3-6 recites features that are not taught or suggested by the Japanese publications. Specifically, Applicants respectfully assert that neither of the Japanese publications teach or suggest the claimed features of supplying a working fluid to a working point of a workpiece, and performing a process of the workpiece at the working point while supplying the working fluid to the working point, as recited in independent Claims 3-6. Further, Applicants respectfully assert that neither of the Japanese publications teach or suggest the claimed features of forming a mixture of the working fluid and abrasive particles, as recited in independent Claim 4. Further, Applicants respectfully assert that such features are not common knowledge.

Thus, for the above reasons, Applicants respectfully request that the rejection of independent Claims 3-6 under 35 U.S.C. § 103(a) in view of the Japanese publications be withdrawn, and the independent claims allowed.

Further, Applicants are unsure as to whether the Office Action has taken official notice that “[i]t would be obvious to encapsulate a liquid, to form microcapsules, admix them with a second liquid and use them in metal working operations.” If the Office Action has taken such notice, pursuant to MPEP §

³ Page 2, lines 23-26, of the outstanding Office Action.

⁴ Page 3, lines 3-7, of the outstanding Office Action.

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2144.04(C), Applicants respectfully challenge the factual assertions as not properly based upon common knowledge for the above reasons, and respectfully assert that the Examiner must therefore support the findings with adequate evidence.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-7 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.



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Tel #: (703)413-3000
Fax #: (703)413-2220
GJM/CDW/PH/me

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to read 'G. J. Maier', written over a horizontal line.

Gregory J. Maier
Registration No. 25,599
Attorney of Record
Christopher D. Ward
Registration No. 41,367

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